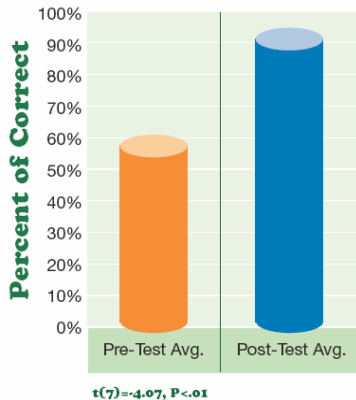




Research Overview

Recent TeachTown Research Supports Treatment Efficacy*



In a recent study supported by a Department of Education grant, eight (8) children (4 with autism, 4 with other developmental disabilities) participated in a two (2) month treatment program using a *TeachTown: Basics* prototype. Data was automatically collected on the child's performance using the software and all 8 children learned new receptive language, matching, and/or social understanding skills during their participation in the study.

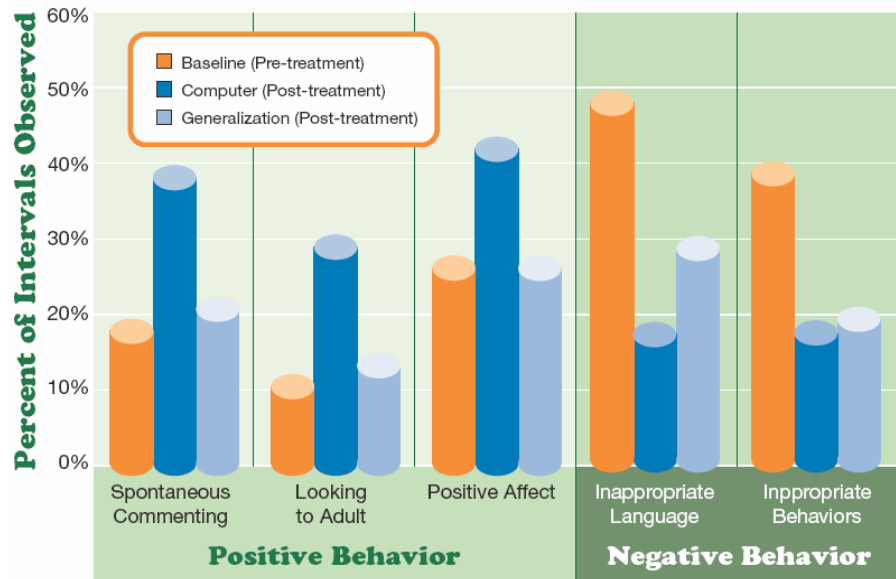
Overall, there was a significant change (a 53% increase) from pre-test scores to post-test scores using the software.

TeachTown Use Also Demonstrated Positive Changes in Behavior, Language, and Social Interaction for Children with Autism*

Many of the behavioral changes observed were counter-intuitive – instead of paying *less* attention to others while on the computer, as most people would, children with autism showed the *opposite* profile.

Children with autism demonstrated a 105% increase in language and social behaviors while using the *TeachTown: Basics* program compared to play activities with their parents.

Specifically, the children used more spontaneous comments (e.g., "Look Mom, a rocket ship!") While appropriate language went up, inappropriate language and behaviors decreased by 61%. Children also looked at their parents more and showed more enjoyment (i.e. positive affect). And while positive social behaviors went up, inappropriate behaviors such as tantrums and avoidance went down. Inappropriate behaviors and inappropriate language also decreased by 44% in the off-computer generalization activities compared to baseline play sessions.



*The results of the study were recently published in the research journal referenced below and presented at the California Association for Behavior Analysis Conference in San Francisco in February, 2006.

Whalen, C., Liden, L., Ingersoll, B., Dallaire, E., and Liden, S. (*in press*). Positive Behavioral Changes Associated with the Use of Computer-Assisted Instruction for Young Children. *Journal of Speech and Language Pathology and Applied Behavior Analysis*.

"There's a buzz in the room when TeachTown starts up! You can hear it from next door as the kids come running and shouting Yea! TeachTown!!!"

Teacher
San Diego Unified School District

Visual Learning, Computers and Autism

Research which examines the effectiveness of computer-assisted instruction for teaching children with autism and other developmental disorders has shown promising results.

There is also evidence that skills learned on the computer may generalize to the natural environment and that computer learning can sometimes result in faster acquisition of skills and higher motivation for many children. A number of peer-reviewed research studies (some listed below) demonstrate many potential positive outcomes for children with autism.

It is important to note that computer-assisted therapy is a relatively new field of research and much more studies are needed to assess the efficacy of using computers to treat children with autism. One of TeachTown's goals is to continue to work with researchers to answer these important questions and advance the science of computer-assisted treatment.



Additional Research on Computers and Autism

Increasing Motivation

- o Increased motivation & decreased behavior problems (no difference in acquisition) between live & computer teaching (*Chen & Bernard-Opitz, 1993*)
- o Increased attention, motivation, and vocabulary acquisition using the computer (*Moore & Calvert, 2000*)
- o Increased sight words and reading on computer compared to traditional teaching (*Williams, Wright, Callaghan, & Coughlan, 2002*)

Improving Reading & Language Skills

- o Improved reading and communication (*Heimann, Nelson, Tjus, & Gillberg, 1995*)
- o Enhanced vocal imitation (*Bernard-Opitz, Sriram, & Sapuan, 1999*)
- o Improved spelling (*Kinney, Vedora, & Stromer, 2003*)
- o Improved vocabulary and grammar (*Bosseler & Masaro, 2003*)
- o Reduces echolalia and inappropriate language (*Hetzroni & Tannous, 2004*)

Improving Social Skills

- o Improved reading and communication (*Heimann, Nelson, Tjus, & Gillberg, 1995*)
- o Enhanced vocal imitation (*Bernard-Opitz, Sriram, & Sapuan, 1999*)
- o Improved spelling (*Kinney, Vedora, & Stromer, 2003*)
- o Improved vocabulary and grammar (*Bosseler & Masaro, 2003*)
- o Reduces echolalia and inappropriate language (*Hetzroni & Tannous, 2004*)

Improving Cognitive Skills

- o Improved problem solving skills (*Bernard-Opitz, Sriram, & Nakhoda-Sapuan, 2001*)

Focusing on Advancing the Science of Treatment for Autism

TeachTown performs ongoing research in conjunction with researchers from major universities, clinics, and hospitals. This research will be distributed to the scientific community and consumers as it is available. More importantly, TeachTown will utilize information gathered from its research to develop more turn-key treatment options for the autism spectrum community.

For more information on research, please visit our website: www.teachtown.com/research